



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|----------------------------------|-------------|----------------------|-------------------------|------------------|
| 09/900,618 | 07/06/2001 | Ambatipudi R. Sastry | SRI-010A | 6069 |
| 52197 | 7590 | 05/16/2006 | EXAMINER | |
| MOSER, PATTERSON & SHERIDAN, LLP | | | HARPER, KEVIN C | |
| SRI INTERNATIONAL | | | ART UNIT | |
| 595 SHREWSBURY AVENUE | | | PAPER NUMBER | |
| SUITE 100 | | | 2616 | |
| SHREWSBURY, NJ 07702 | | | DATE MAILED: 05/16/2006 | |

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | | |
|------------------------------|------------------------|--|---------------------|--|
| Office Action Summary | Application No. | | Applicant(s) | |
| | 09/900,618 | | SASTRY ET AL. | |
| | Examiner | | Art Unit | |
| | Kevin C. Harper | | 2616 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 and 17-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 17-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Arguments

In view of the appeal brief filed on February 15, 2006, PROSECUTION IS HEREBY REOPENED. A new ground of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below.

Applicant's arguments, filed February 15, 2006 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Jamoussi et al. (US 6,128,280).

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-3, 5, 17 and 20-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Jamoussi et al. (US 6,128,280).

1. Regarding claims 1, 17 and 20, Jamoussi discloses in a network comprising several router nodes (fig. 1, ATM switches) connected by communication links (item 34; col. 4, lines 35-37), a method of providing quality of service assurances for transmitting packets over a channel (fig. 1, item 34) that transmits at a nominal bandwidth (col. 1, lines 24-29). The method comprises defining several classes representing an aggregate behavior of packets (fig. 3, pools 1-3; note: CBR, rt-VBR and nrt-VBR), allocating to each of the classes a nominal departure rate (fig. 3, bandwidth provided, fig. 6A; note: pool admitted BW of 1.6 plus an additional pool elastic BW of 0.6) at which packets of that class are transmitted when available bandwidth of the channel is operating at the nominal bandwidth, assuring each of the classes a minimum allocation of the available bandwidth for transmitting packets of that class if the available bandwidth of the channel is operating at less than the nominal bandwidth (fig. 6A, item 48 or 56; col. 8, lines 51-55 and 63-66; col. 9, lines 44-49; col. 12, lines 25-29; figs. 7, 10 and 10b; note: elastic bandwidth is reduced; col. 5, lines 61-65), wherein the nominal departure rate (fig. 3, item 52; col. 5, lines 18-25) and the minimum allocation (fig. 6A, item 48 or 56; figs. 10 and 12) are dynamically changeable. Further regarding claim 17, the router node comprises a classifier (fig. 1, item 14) for defining classes (fig. 3, item 50; fig. 5, item 98), an allocator and rate prioritizer (both fig. 1, item 14 or 16) for allocating the nominal departure rate and the minimum allocation (col. 5, lines 48-56). Further regarding claim 20, the node includes a processor (fig. 1, item 22 and 16; col. 5, lines 5-7) for implementing the communication method.

Art Unit: 2616

2. Regarding claims 2, 5 and 21, a minimum percentage is assigned to each class (fig. 3, item 48; col. 5, lines 12-15). The nominal departure rate (fig. 6A, item 54 combined with item 56) is a percentage of a nominal bandwidth of an outgoing communication link of the router node.

3. Regarding claim 3, the minimum allocation (fig. 6A, item 48 or item 54) is proportionally different than the nominal departure rate allocated to each class (bandwidth allocated by fig. 6A, item 54 and item 56).

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim 4, 10 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jamoussi et al. (US 6,128,280) in view of Soumiya et al. (US 5,818,818).

4. Regarding claims 4 and 10, Jamoussi discloses a system for assigning bandwidth to classes of data. However, Jamoussi does not disclose establishing a drop precedence for the classes to determine a priority for dropping packets of that class, or dropping packets from queues to limit the delay at a given router node. Soumiya discloses establishing a drop precedence for classes to determine a priority for dropping packets (col. 1, lines 56-62; col. 2, lines 8-13). Dropping packets from queues limits the delay at a node (col. 2, lines 4-7). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have a drop precedence by discarding packets from queues to limit delay in the invention of Jamoussi in order to reduce congestion at a node (Soumiya, col. 1, lines 56-59).

Art Unit: 2616

5. Regarding claims 13-14, Jamoussi does not disclose scheduling priorities for the classes. Soumiya discloses scheduling priorities for classes (fig. 4, item 23) according to a criterion (col. 5, lines 42-44) of tolerated delay (col. 5, lines 3-5 and 12-15). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have scheduling priorities in the invention of Jamoussi in order to provide or maintain quality of service within a network (Soumiya, col. 5, lines 9-12, 19-20, 35-37 and 42-47).

Claims 6-9 and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jamoussi et al. (US 6,128,280).

6. Regarding claims 6-9 and 18-19, Jamoussi discloses traffic classes having a minimum allocation (fig. 3, items 48 and 50). The router node (fig. 1, item 12) has different outgoing communication links (col. 4, lines 35-37). However, Jamoussi does not disclose different allocations for the different outgoing links. Although, Jamoussi discloses that the allocation is related to the bandwidth of the outgoing link (fig. 3, item 52). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have different allocations on different outgoing links in the invention of Jamoussi in order to properly accommodate traffic on the different outgoing links (col. 5, lines 18-25).

7. Further regarding claims 7 and 9, Jamoussi does not disclose more than one router node for allocating bandwidth. However, Jamoussi discloses convention ATM networks (col. 1, lines 22-23). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have several nodes for allocating bandwidth in the invention of Jamoussi in order to provide a network for relaying information across geographic or logical regions as is known in the art.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jamoussi in view of Soumiya as applied to claim 10 above, and further in view of Vaman et al. (US 6,011,780).

8. Jamoussi in view of Soumiya does not disclose providing an alternate route for data traffic. Vaman discloses providing alternate routes during congestion (fig. 7). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to provide an alternate route for data traffic in the invention of Jamoussi and Soumiya in order to maintain QoS guarantees (Vaman, col. 1, lines 45-50; col. 11, lines 1-8; and lines 39-52).

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jamoussi in view of Kuehnel (US 5,907,542).

9. Jamoussi does not disclose wireless links. Kuehnel discloses wireless links for a communication system (fig. 2; col. 3, lines 44-45). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have wireless links in the invention of Jamoussi in order to provide for reduced implementation costs (Kuehnel, col. 3, lines 44-48 and 51-54).

Conclusion

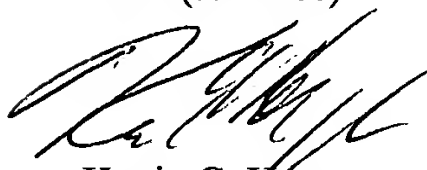
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Harper whose telephone number is 571-272-3166. The examiner can normally be reached weekdays from 11:00 AM to 7:00 PM ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To, can be reached at 571-272-7629. The centralized fax number for the Patent

Art Unit: 2616

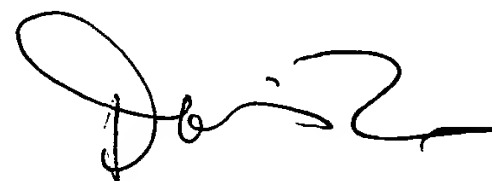
Office is 571-273-8300. For non-official communications, the examiner's personal fax number is 571-273-3166 and the examiner's e-mail address is kevin.harper@uspto.gov.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications associated with a customer number is available through Private PAIR only. For more information about the PAIR system, see portal.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kevin C. Harper

May 10, 2006



DORIS H. TO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600